

introducing process gas into said reactor chamber; and

heating the upper electrode with said heater to a temperature between about 300°C and about 500°C
such that any material resulting from the reaction deposited on the surface of the upper electrode forms a stable layer of material.

15. (Currently Amended) The method of claim ~~12~~ 14 wherein:

the method of operation of the reactor is an etch method.

16-18. (Cancelled)

19. (Currently Amended) ~~The method of claim 16~~ A method of operating a reactor which comprises a reactor chamber, an upper electrode, a heater that heats said upper electrode, and gas inlets and outlets, the method comprising:

introducing process gas into said reactor chamber, wherein the method of operation of the reactor is a platinum etch method, and wherein oxygen and chlorine are present in the reactor, ~~the method includes; and~~

heating the upper electrode with said heater to a temperature in order to cause deposits of oxygen and chlorine to de-absorb from the upper electrode in order to leave mostly platinum deposited on the electrode, such that any material resulting from the reaction deposited on the surface of the upper electrode forms a stable layer of material.

20-55. (Cancelled)

56. (Currently Amended) ~~The method of claim 12, wherein the reactor further comprises at least one side electrode, the method further comprising:~~ A method of operating a reactor which comprises a reactor chamber, an upper electrode, at least one side electrode, a first heater provided in the upper electrode that heats said upper electrode, and a second heater provided in the at least one side electrode that heats said at least one side electrode, and gas inlets and outlets, the method comprising:

introducing process gas into said reactor chamber;

heating the upper electrode with said first heater to a temperature such that any material resulting from the reaction deposited on the surface of the upper electrode forms a stable layer of material; and

heating the at least one side electrode with said second heater such that any material resulting from the reaction deposited on the surface of the at least one side electrode forms a stable layer of material.

57-58. (Canceled)

59. (Currently Amended) A method ~~according to claim 58, wherein the step of heating includes heating an upper~~ for etching a workpiece in a chamber comprising:

etching a workpiece in the reactor chamber; and

heating using a heater provided in a surface selected from side electrodes, electrode shields, and walls of the reactor such that etch materials deposited on the surface with the heater form a stable layer of material that does not flake off onto the workpiece.

60. (Currently Amended) A method according to claim 58, wherein the step of heating ~~an upper surface~~ includes heating the ~~upper~~ surface with the heater until any gas collected on the ~~upper~~ surface with the heater de-absorbs from the ~~upper~~ surface with the heater.

61. (Currently Amended) A method according to claim 58, wherein the step of heating ~~an upper surface~~ includes heating the ~~upper~~ surface with the heater until any gas collected on the ~~upper~~ surface with the heater boils off the ~~upper~~ surface with the heater .

62-63. (Cancelled)

64. (New) The method of claim 14, wherein the step of heating the upper electrode heats the upper electrode to a temperature greater than 300°C.

65. (New) The method of claim 56, wherein the step of heating the at least one side electrode with the second heater comprises heating the second electrode to a temperature between about 300°C to about 500°C.

66. (New) The method of claim 56, wherein the step of heating using a heater provided in a surface selected from side electrodes, electrode shields comprising heating the heater to a temperature between about 300°C to about 500°C.